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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/787,228

07/19/2001

Anna Victoria Hine

PL-9830

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05/02/2006

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EXAMINER

EPPERSON, JON D

ART UNIT

PAPER NUMBER

1639

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/787,228	Applicant(s) HINE ET AL.	
	Examiner Jon D. Epperson	Art Unit 1639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 and 21-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-20 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/23/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of the Application

1. The Response filed January 23, 2006 is acknowledged.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

Status of the Claims

3. Claims 1-27 were pending. Applicants amended claims 14 and 19. In addition, Applicants added claim 28. Therefore, claims 1-28 are currently pending.
4. Claims 1-13 and 21-27 are drawn to non-elected species and/or inventions and thus these claims remain withdrawn from further consideration by the examiner, 37 CFR 1.142(b), there being no allowable generic claim.
5. Therefore, claims 14-20 and 28 are examined on the merits in this action.
6. Please note that this application contains claims 1-13 and 24-27 drawn to a nonelected invention(s). This was addressed in the previous action (see 9/20/05 Non-final rejection, paragraph 3). A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144). See MPEP § 821.01.

Withdrawn Objections/Rejections

7. The objections to the specification are withdrawn in view of Applicants' amendments to the specification. The objection to claims 14-20 is withdrawn in view of Applicants' amendments to claim 14. The rejection to claims 14-20 under 35 U.S.C. 112, second paragraph is withdrawn in view of Applicants' amendment to claim 14. All other rejections are maintained and the arguments are addressed below.

Outstanding Objections and/or Rejections

Claims Rejections - 35 U.S.C. 102

8. Claims 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Choo et al. (WO 96/06166) (Date of Patent is **February 29, 1996**).

For **claim 14**, Choo et al. (see entire document) disclose "libraries of DNA sequences encoding zinc finger binding motifs for display on a particle [e.g., phage], together with methods of ... use ... for various *in vitro* or *in vivo* applications" (e.g., see Choo et al., abstract), which anticipates the claimed invention. For example, Choo et al. disclose **(a)** a method of identifying a protein that interacts with a specific binding partner (e.g., see figure 4 wherein the "specific binding partners" represent members of the 12 oligonucleotide libraries i.e., GNN, ANN, TNN, etc. and the "proteins that interact with the specific binding members" include the α -helix sequences shown i.e., RSDHLTTHIR, RYDALEAHRR, etc. that are subsequently "identified" by their binding signatures). Choo et al. also disclose providing a set of libraries of proteins as defined in claim 7. For example, Choo et al. disclose **(a)(i)** 6 to 20 libraries in which each library has at least one

but less than 20 amino acid residues at the said first specified position and is randomized at the said at least one other determined position (e.g., see figure 4, α -helix sequence entries wherein Library 1a = RSDHLTTHIR + RVDALEAHRR, Library 2a = RLDGLRTHLK + RADALMVHKR, Library 3a = RSDTLKKHGK + RGDALTSHER, Library 4a = RGDHLKDHIK + RGPLARHGR, Library 5a = REDVLIRHGK + RSDLLQRHHK, Library 6a = RQDTLVGHER + RAADLNRHVR, Library 7a = RKDVLVSHVR + RRDVLMNHVR, etc.; please note that many other interpretations are possible). In libraries 1-7 above, each library has at least one but less than 20 amino acid residues at the said first specified position (i.e., each library has an “R” at the first specified “-1” position; see also paragraph bridging pages 26-27 showing positions -1, +3 and +6 are “involved in the recognition [i.e., capable of specific binding interactions] of DNA”; see also Discussion describing the importance of the -1, +3 and +6 positions in DNA recognition). In addition, libraries 1-7 above contain an at least one other determined position that is randomized (e.g., see figure 2 showing “randomization” at position “1” marked with an “X”; see also figure 4 showing, for example, random incorporation of “S” and “V” at position 1 in library 1a = RSDHLTTHIR + RVDALEAHRR; see also Library 2a = RLDGLRTHLK + RADALMVHKR showing random incorporation of “L” and “A”; see also Library 3a = RSDTLKKHGK + RGDALTSHER showing random incorporation of “S” and “G”; see also Library 4a = RGDHLKDHIK + RGPLARHGR showing random incorporation of “G” and “G”; see also Library 5a = REDVLIRHGK + RSDLLQRHHK showing random incorporation of “E” and “S”, see also Library 6a = RQDTLVGHER + RAADLNRHVR showing random

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incorporation of “Q” and “A”; see also Library 7a = RKDVLVSHVR + RRDVLMNHIR showing random incorporation of “K” and “R”; see also page 5, lines 3-4, “the sequences coding for zinc finger binding motifs having random allocation of amino acids at positions -1, +2, +3, +6 and at least one of positions +1, +5 and +8”). Furthermore, libraries 1-7 are arranged in such a way that a specific binding partner identifies an amino acid residue at the said first specified position that takes part in the specific binding interaction (e.g., see figure 4, right hand side wherein the “binding site signatures” are disclosed that results from a unique “arrangement” of the libraries with respect to the twelve target oligonucleotide libraries; see also, for example, entries listed 4 and 6 from the bottom of figure 4 that begin with “RRD ...” and “SRD ...” showing that a one amino acid change, R → S at position -1, is responsible for a change in binding affinity to the TNN target i.e., R at position -1 is “identified” as a strong binder and S at position -1 is “identified” as a weak binder with respect to the TNN target).

In addition, Choo et al. disclose (a)(ii) 6 to 20 libraries in each of which libraries said first specified position is randomized and at least one but less than 20 amino acid residues is present at said at least one other specified position (e.g., see figure 4 entries wherein Library 1b = NRDTLTRHSK + TPGNLTRHGR discloses random incorporation of “N” and “T”; Library 2b = NGGNLGRHMK + NQSNLERHHRR wherein “N” and “N” are randomly incorporated; Library 3b = DRSNLERHHTR + QQSNLVRHHQR wherein “D” and “Q” are randomly incorporated; Library 4b = NGANLERHHRR + SQGNLQRHHGR wherein “N” and S” are randomly incorporated; Library 5b = TGGSLARHER + DHANLARHTR wherein “T” and “D” are randomly incorporated;

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Library 6b = LQSNLVRHQR + QGGNLVRHLR wherein “L” and “Q” are randomly incorporated; Library 7b = SRDVLRRHNR + EKATLARHMK wherein “S” and “E” are randomly incorporated; please note that many other interpretations are possible). In this scenario, the library positions at the “-1” position are randomized (e.g., see “bolded” amino acids above; see also page 5, lines 3-4, “the sequences coding for zinc finger binding motifs having random allocation of amino acids at positions -1”). Furthermore, all of the amino acids located at the +6 position (i.e., the “at least one other specified” position) contain at least one but less than 20 amino acids residues at at least one other specified position (e.g., compare amino acids at “underlined” +6 positions, which are all “R” groups, to the “bolded” amino acids at the -1 position i.e., N, T, etc.).

Choo et al. also disclose **(b)-(c)** incubating the specific binding partner with each library of the set and observing specific binding interactions with certain libraries of the set (e.g., see figure 4 wherein the intensity of the “shaded” boxes indicates “observed specific binding interactions” for each library member). Finally, Choo et al. disclose **(d)** using the observations to identify a protein which interacts with the specific binding pattern (e.g., see figure 4, right hand side wherein the “binding site signatures” are disclosed; see also, for example, entries 4 and 6 from the bottom that begin with “RRD ...” and “SRD ...” showing that a one amino acid change, R → S at position -1, is responsible for a change in binding affinity to the TNN target i.e., R at position -1 is “identified” as a strong binder and S at position -1 is “identified” as a weak binder with respect to the TNN target).

For *claim 15*, Choo et al. disclose polynucleotides (e.g., see figure 4 wherein

GNN, ANN, etc. are disclosed).

For *claim 16*, Choo et al. disclose radiometric and luminescent assays (e.g., see figure 10; see also page 14, second to last paragraph, “Modification of the nucleic acid of interest (in the sense of binding thereto by a zinc finger polypeptide) could be detected in any of a number of methods (e.g., gel mobility shift assays, use of labeled zinc finger polypeptides – labels could include radioactive, fluorescent, enzyme or biotin/streptavidin labels”; see also figure 11).

For *claim 17*, Choo et al. disclose “imaging” (e.g., see figure 10).

Response

9. Applicant’s arguments directed to the above 35 U.S.C. § 102 rejection were fully considered (and are incorporated in their entirety herein by reference) but were not deemed persuasive for the following reasons. Please note that the above rejection has been modified from its original version to more clearly address applicants’ newly amended and/or added claims and/or arguments.

[1] Applicants argue, “Choo et al. actually discloses a method of identifying a binding partner that interacts with a specific protein [not, presumably, the identification of a protein that interacts with a specific binding partner i.e., the reverse]” (e.g., see 1/23/06 Response, page 16, second to last paragraph).

[2] Applicants argue, “that what the Examiner regarded as Choo’s library 1a is merely a collection of two proteins of known sequence and is not a library as defined in Applicants’ claimed invention” (e.g., see 1/23/06 Response, page 15, especially second to last paragraph).

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[3] Applicants argue, “[1] Choo et al. discloses a number of pre-selected proteins ... [2] all derived from a single library ... [3] the sequences of the proteins in Choo et al. are known prior to the assay”, which presumably distinguished the claimed invention (e.g., see 1/23/06 Response, paragraph bridging pages 15 and 16).

[4] Applicants argue, “Choo et al. ... discloses a single library of DNA sequences, for example 64 DNA sequences. Thus, Choo et al. refers to a single library of genes or proteins. By contrast, the present application claims multiple libraries ... of genes or proteins” (e.g., see 1/23/06 Response, page 16, middle paragraph).

[5] Applicants argue, “Choo et al. refers to multiple libraries of ligands ... whereas Applicants refer to only a single ligand” (e.g., see 1/23/06 Response, page 16, middle paragraph).

This is not found persuasive for the following reasons:

[1] First, the Examiner contends that Applicants are arguing a distinction without a difference. That is, you can’t identify one without identifying the other and, accordingly, figure 4 shows the identification of both. Second, Applicants’ preamble merely recites the purpose of the claimed method and thus is not afforded any patentable weight. See *Pitney Bowes Inc. v. Hewlett Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165-66 (Fed. Cir. 1999):

If . . . the body of the claim fully and intrinsically sets forth the complete invention, including all of its limitations, and the preamble offers no distinct definition of any of the claimed invention’s limitations, but rather merely states, for example, the purpose or intended use of the invention, then the preamble is of no significance to claim construction because it cannot be said to constitute or explain a claim limitation.

[2] The Examiner respectfully disagrees. Applicants define a library as follows: “A library of compounds (e.g., genes or proteins) consists of a plurality of compounds which are all different but which have some characteristic in common. The compounds of the library may be presented either separate or together, in solution or solid phase. In a set of libraries, the

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compounds of any one library have some characteristic in common but which differentiates them from the compound of each other library of the set” (e.g., see specification, page 8, last paragraph). Thus, a library can contain as little as two members as long as this small set of compounds are (1) not the same (i.e., different) and (2) have a characteristic in common. Every library outlined in the rejection above contains two members that are (1) not the same (i.e., different) and (2) share a characteristic in common (i.e., form a zinc finger). Thus, the two member sets outlined in the rejection above constitute libraries as explicitly defined by Applicants’ specification.

[3] In response to applicant’s argument that the references fail to show certain features of applicant’s invention, it is noted that the features upon which applicant relies (i.e., [1] proteins that are not “pre-selected”, [2] proteins that are not derived from a single library, [3] sequences of the proteins that are not known prior to assay) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). That is, Applicants claims are broad enough to read on a library that is pre-selected”, derived from a single library and are known prior to assay (e.g., see claim 14).

[4] The Examiner respectfully disagrees. Choo et al. disclose at least 14 libraries (e.g., 1-7a and 1-7b) as outlined in the rejection above. The fact that these libraries may have been derived from a single library or somehow associated with each other by some other means is not material. Applicants do not set forth any qualifying limitations directing that the libraries be derived from multiple sources.

[5] The Examiner respectfully disagrees. Applicants use “comprising” terminology, which does not preclude the addition of more than one ligand.

Accordingly, the 35 U.S.C. §102(b) rejection cited above is hereby maintained.

Claim Rejections - 35 USC § 103

10. Claims 14-20 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choo et al. (WO 96/06166) (Date of Patent is **February 29, 1996**) and Udenfriend et al. (Udenfriend, S.; Gerber, L.; Nelson, N. “Scintillation Proximity Assay: A Sensitive and Continuous Isotopic Method for Monitoring Ligand/Receptor and Antigen/Antibody Interactions” *Anal. Biochem.* **1987**, *161*, 494-500).

For *claims 14-17*, Choo et al. teach all the limitations stated in the 35 U.S.C. 102(b) rejection above (incorporated in its entirety herein by reference), which anticipates and, as a result, renders obvious claims 14-17.

The prior art teaching of Choo et al. differ from the claimed invention as follows:

For *claim 18-20*, the prior art teachings of Choo et al. differ from the claimed invention by not specifically reciting the use of a scintillation proximity assay. Choo et al. only teach the use of radiolabels in general, but not specifically refer to the SPA technique (e.g., see Choo et al., page 14, second to last paragraph, “Modification of the nucleic acid of interest (in the sense of binding thereto by a zinc finger polypeptide) could be detected in any of a number of methods (e.g., gel mobility shift assays, use of labeled zinc finger polypeptides – labels could include radioactive, fluorescent, enzyme or biotin/streptavidin labels”).

However, Udenfriend et al. teach the following limitations that are deficient in Choo et al.:

For **claim 18**, Udenfriend et al. (see entire document) teach the use of a scintillation proximity assay (e.g., see Udenfriend et al., abstract).

For **claim 19**, Udenfriend et al. teach the use of radiolabeled binding partners and immobilized proteins (e.g., see figures 1 and 2 wherein proteins are immobilized on bead surface that subsequently react with radiolabeled binding partners; see also abstract).

For **claim 20**, Udenfriend et al. disclose the use of a washing step (e.g., see figure 4 wherein the ¹²⁵I-labeled heptapeptide is displaced (i.e., washed) from the anti-heptapeptide Ab beads; see also figure 6 wherein the labeled agonist is washed from the beads using higher affinity agonists in a competition experiment).

For **claim 28**, none of the cited references disclose 60 libraries in three groups of 20. However, the Examiner contends that this limitation represents a mere “scale up” of the underlying process disclosed by Choo et al. and, as a result, is *prima facie* obvious. See *In re Rinehart*, 531 F.2d 1048, 189 U.S.P.Q. 143 (C.C.P.A. 1976) (It is clear that the mere scaling up of a prior art process capable of being scaled up would not establish patentability in a claim to an old process so scaled). Alternatively, the claimed 60 libraries in three groups of 20 represents repetition of steps (i.e. number of samples analyzed) see *In re Harza*, (274 F.2d 669, 671, 124 USPQ 378, 380 (CCPA 1960)) (“It is well settled that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced”) and thus is *prima facie* obvious. A person of skill in the art would have been motivated to produce a larger library to achieve proteins

with higher binding affinity or greater selectivity for a particular target. Furthermore, the libraries would have been grouped according to the -1, 3 and 6 positions as outlined in figure 4 of Choo et al. (e.g., see figure 4, shaded region).

It would have been *prima facie* obvious to one skilled in the art at the time the invention was made to use the “scintillation proximity assay” as taught by Udenfriend et al. to detect the zinc finger/DNA interactions as taught by Choo et al. because Udenfriend et al. explicitly state that their assay can be used for monitoring ligand/receptor interactions including protein/DNA interactions (e.g., see Choo et al., abstract), which would encompass the zinc finger protein/ DNA ligand interactions disclosed by Choo et al. (e.g., see Choo et al., figure 4). Furthermore, one of ordinary skill in the art would have been motivated to use the Scintillation Proximity Assay because Udenfriend et al. explicitly state, “Scintillation proximity assay (SPA) makes it possible to use radioisotopes for monitoring binding reactions continuously without the need to separate free from bound components. As a result SPA can be carried out more rapidly than most other methods ... The method also lends itself to automation ... Another feature of SPA is that the key reagents ... are relatively inexpensive” (e.g., see Choo et al., abstract; see also page 495, column 1, paragraph 1, “The methodology is rapid, simple, and sensitive and, what is most important, permits kinetic measurements under steady-state conditions”). Finally, one of ordinary skill in the art would have reasonably expected to be successful because Udenfriend et al. state that both proteins and nucleic acids can be used in a scintillation proximity assay (e.g., see Udenfriend et al., abstract; see also page 499, paragraph 3, “The few applications of SPA reported above do not represent all that

can be done with this system ... [SPA] can be used to monitor almost any reaction”), which would encompass the zinc finger protein/DNA interactions disclosed by Choo et al. (e.g., see Choo et al., figure 4). In addition, Udenfriend et al. state, “[t]he sensitivities already achieved with SPA procedures are comparable to the sensitivities of other procedures in use today” (e.g., see Udenfriend et al., abstract). Further Choo et al. state that radioisotopes, like the ones disclosed by Udenfriend et al. (e.g., see Udenfriend et al., abstract), are compatible with their method (e.g., see Choo et al., page 14, second to last paragraph).

Response

11. Applicant’s arguments directed to the above 35 U.S.C. § 103(a) rejection were fully considered (and are incorporated in their entirety herein by reference) but were not deemed persuasive for the following reasons. Please note that the above rejection has been modified from its original version to more clearly address applicants’ newly amended and/or added claims and/or arguments.

Applicants argue, “... as discussed above, Choo et al. does not teach the instant invention. As such, Applicants request reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejections of claim 14-17” (e.g., see 1/23/06 Response, page 17, especially paragraphs 2 and 3).

This is not found persuasive for the following reasons:

To the extent that Applicants are merely repeating their arguments, the Examiner contends that those issues were adequately addressed in the previous sections, which are incorporated in their entirety herein by reference.

Accordingly, the 35 U.S.C. § 103(a) rejection cited above is hereby maintained.

New Rejections

Claims Rejections - 35 U.S.C. 112, first paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

12. Claims 14-20 and 28 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed had possession of the claimed invention. This is a new matter rejection.

A. In currently amended claim 14 (and newly added claim 28), to the extent that the claim no longer requires a “different” amino acid at at least one other specified position in the second set of 6 to 20 libraries, the increased breadth of possible modification constitutes new matter, since there is no specification support or original claim support for such scope; nor has applicant provided any indication where such support exists. If applicant believes this rejection is in error, applicant must disclose where in the specification support for this amendment can be found in accordance with MPEP § 714.02.

Conclusion

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Applicant's amendment necessitated any new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon D Epperson whose telephone number is (571) 272-0808. The examiner can normally be reached Monday-Friday from 9:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on (571) 272-0811. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jon D. Epperson, Ph.D.
April 28, 2006

JON EPPERSON, PH.D.
PATENT EXAMINER

